

AMENDMENTS

Please amend the above-identified application as follows:

In the Specification:

Please substitute the Abstract with the following amended paragraph.

Q1
~~The present invention provides a~~ A method and an apparatus that enable spare instruction slots within a code module to be utilized opportunistically for insertion of instructions associated with correctness check functions. The apparatus ~~of the present invention~~ comprises a compiler, ~~which may be comprised solely as hardware or as a combination of hardware and software. The compiler that performs~~ generates code ~~generation~~ and ~~generates~~ an initial instruction schedule. During ~~the~~ generation of the initial instruction schedule, the compiler ignores code sequences associated with correctness check functions. After the initial instruction schedule has been generated, the compiler examines the initial instruction schedule and determines locations of spare instruction slots in the initial instruction schedule that can potentially be utilized for insertion of the code sequences associated with the correctness checks. The code sequences associated with the correctness checks are then inserted into the instruction schedule to the extent that insertion of the code sequences does not lengthen the final instruction schedule. Consequently, no performance penalty is incurred at run time.